

Illinois Hospitals Continue Reducing Infections

June 2012

Table 1 Summary of Central Line-associated Bloodstream Infection (CLABSI) Data by Type of Intensive Care Unit (ICU), 2011

ICU Type	Number of Units Reporting	Number of Infections		Standardized Infection Ratio (SIR)	95% CI for SIR	
		Observed	Predicted		Lower	Upper
All ICUs combined	208	376	644.3	0.584	0.526	0.646
Adult ICUs*	153	256	416.6	0.616	0.543	0.696
NICUs**	38	79	166.7	0.474	0.375	0.590
PICUs***	17	41	63.8	0.643	0.461	0.872

*Adult medical, medical/surgical and surgical

**Neonatal ICU

***Pediatric ICU

Table 1 provides a snapshot summary of central line-associated bloodstream infections (CLABSI) in Illinois intensive care units (ICUs) during 2011. Illinois hospitals have been reporting CLABSI data from adult ICUs to the Illinois Department of Public Health using the CDC's National Healthcare Safety Network since October, 2008. Reporting of CLABSI data from both PICUs and NICUs commenced in October, 2009. CLABSI data are summarized using the standardized infection ratio (SIR), a summary statistic used to measure relative difference in CLABSI occurrence during a reporting period, in this case 2011, compared to a common referent period (national data collected during 2006-2008). For additional information on Standardized Infection Ratios (SIRs), and confidence intervals (CIs), see the methodology section of the Illinois Hospital Report Card website.

During 2011, 376 CLABSI were reported compared to 644.3 predicted, for an SIR of 0.58 (95% CI 0.526-0.646). This translates to a 41.6% reduction compared to the national referent period noted above. This is a statistically significant reduction. This significant reduction in CLABSI was achieved in all three intensive care settings – adult ICUs, neonatal ICUs (NICUs) and pediatric ICUs (PICUs). The reduction of CLABSI was 35.7% in PICUs, 38.4% in adult ICUs, and 52.6% in neonatal ICUs.

Changes in CLABSI between 2010 and 2011

Table 2 Changes in Standardized Infections Ratios (SIRs) in Illinois ICUs, 2010 compared to 2011: CLABSI

Intensive Care Unit Type	SIR 2010	SIR 2011	Significant Change	p-value
All ICUs Combined	0.665	0.584	No	0.06
Adult ICUs*	0.654	0.616	No	0.49
NICUs	0.658	0.474	Decrease	0.02
PICUs	0.746	0.643	No	0.53

By comparing SIRs between two sequential time periods, it is possible to assess Illinois' progress in preventing healthcare acquired infections. Table 2 indicates that while there were decreases in the number of CLABSI reported in all ICUS combined between 2010 and 2011, as reflected in the decreased SIR, this change was not statistically significant. The only statistically significant decrease between 2010 and 2011 was observed in the NICUs. It should be noted, however, that there was a statistically significant decrease in the SIR between 2009 (SIR 0.88) and 2010 (SIR 0.65) for adult ICUs. Continued monitoring of CLABSI rates will assess the magnitude and pace of CLABSI prevention efforts in Illinois.

Of the 145 Illinois hospitals reporting CLABSI from adult ICUs, NICUs and PICUs in both 2010 and 2011, 65% had the same number or fewer CLABSI in 2011 compared with 2010. Almost one-third (32%) of these hospitals reported 0 infections during 2010 and 2011.

Hospitals report CLABSI data themselves and, in August 2011, a validation study, conducted by experienced professionals, was initiated to assess the accuracy of this data. Results of this study are forthcoming.